IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	10/676,312
Applicant	:	Hao Pan
Conf. No.	:	8186
Filed	:	September 30, 2003
TC/A.U.	:	2629
Examiner	:	Fatahi Yar, Mahmoud
Docket No.	:	SLA1347 (7146.0167)
Customer No.	:	55648
Title	:	SYSTEM FOR DISPLAYING IMAGES ON A DISPLAY

RESPONSE

Chernoff, Vilhauer, McClung and Stenzel
601 S.W. Second Avenue, Suite 1600
Portland, OR 97204

April 29, 2010

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action of April 14, 2010, please amend the above-identified application as follows:

Amendments to the Specification are not included in this paper.

Amendments to the Claims are not included in this paper.

Amendments to the Drawings are not included in this paper.

Remarks begin on page 2 of this paper.

An **Appendix** including amended drawing figures is not included in this paper.

REMARKS

This amendment responds to the office action dated April 14, 2010.

The Examiner has stated that independent claim 4 is allowable, and that independent claim 3 would be allowable if rewritten in independent form. The Examiner rejected the remaining claims 1 and 2 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Zimmerman et al., U.S. Patent No. 7,213,820 in view of Wood, U.S. Patent No. 6,288,695, and in further view of Matsushima, U.S. Patent No. 5,976,086.

The applicant respectfully submits that the office action has not stated a prima facie case of obviousness as the asserted not only lacks any cogent explanation of obviousness, but the cited references teach against their combination.

First, the applicant notes that the teachings of the three cited references are *completely* unrelated to each other. Zimmerman discloses pre-processing techniques used to capture a 360-degree image intended to completely surround the viewer, when displayed. Zimmerman is silent on the types of display apparatuses that would be used to display such images, or on the techniques used to drive those displays. Wood teaches a driving technique for modulating the voltage to a pixel *during* individual frames displayed on a luminescent-type matrix display, such as a plasma display. In particular, Wood discloses a technique of addressing a driving signal having a plurality of bits to a gate, in which the gate voltage varies depending on which bit of the signal for that frame is being read. *See* Wood at col. 5 line 26 to col. 6 line 46 (e.g. "It will be apparent that increasing the pixel intensity *during* display of a frame decreases the amount of time needed for the frame."). Matsushima discloses techniques for processing medical ultrasound images of the interior of a living person, and in particular discloses averaging

luminance values from sequential captured frames to remove thermal and other sources of noise unique to ultrasonic images, but in a manner that compensates for the fact that a person's organs are moving even when the person remains still, meaning that the images vary greatly between the averaged frames. *See* Matsushima at col. 7 line 37 to col. 9 line 47.

Presumably, the Examiner's combination of Zimmerman and Wood is premised on the assumption that the 360-degree images captured by Zimmerman could be displayed on the type of luminescent matrix disclosed by Wood. Though true, this combination is clearly in conflict with Matsushima in that the combination of Zimmerman and Wood teaches the display of an image captured by a camera at the center of a 360-degree panoramic, while the techniques taught by Matsushima are only relevant to an ultrasound image which by definition is not captured by a 360-degree panoramic from inside a person's body. Hence one of ordinary skill in the art would not find any relevance in the teachings of Matsushima to the combination of Zimmerman and Wood as cited by the Examiner.

Moreover, independent claim 1 recites the limitation of "overdriving a voltage to said portion to a current value automatically selected based upon: (i) at least one predicted displayed luminance value of said pixel in respective ones of at least one subsequent frame of said video image; and (ii) at least one previously displayed luminance value of said pixel in respective ones of at least one previous frame of said video image." The Examiner argues that Wood discloses overdriving a pixel of a portion of an image, but this is true only in the sense that Wood's driving voltage is modulated in the interval of a single a frame so as to shorten the duration in which the frame is illuminated. Thus, not only would one of ordinary skill in the art see the irrelevance of data relating to previous or subsequent frames to this technique, but Wood actually teaches

against this modification in that Wood teaches that the raised or overdriven intensity of a pixel when displaying the fourth-from-the-least-significant-bit "is set to be eight times the prior intensity" of the bit before. An examiner's combination cannot modify the principle of operation of the primary reference, and modifying the overdrive value to replace this teaching with the averaging of Matsushima would certainly do so.

In view of the foregoing remarks, the applicant respectfully requests reconsideration and allowance of claims 1-4.

Respectfully submitted,

Kurt Rohlfs
Reg. No. 54,405
Tel No.: (503) 227-5631